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## BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS

BOB STUMP, CHAIRMAN  
GARY PIERCE  
BRENDA BURNS  
BOB BURNS  
SUSAN BITTER SMITH

2014 FEB - 1 P 3:03

AZ CORP COMMISSION  
DOCKET CONTROL

ORIGINAL

IN THE MATTER OF THE APPLICATION OF  
CHAPARRAL CITY WATER COMPANY FOR A  
DETERMINATION OF THE CURRENT FAIR  
VALUE OF ITS UTILITY PLANT AND  
PROPERTY AND FOR INCREASE IN ITS RATES  
AND CHARGES BASED THEREON.

DOCKET NO. W-02113A-13-0118

The Utilities Division ("Staff") of the Arizona Corporation Commission ("Commission") hereby files the Surrebuttal Testimony of Staff witnesses Gerald W. Becker and John A. Cassidy in the above-referenced matter.

RESPECTFULLY SUBMITTED this 7<sup>th</sup> day of February, 2014.Arizona Corporation Commission  
DOCKETED

FEB 07 2014

DOCKETED BY

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Original and thirteen (13) copies of  
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Arizona Corporation Commission  
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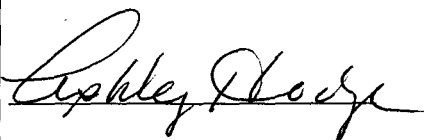
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OF CHAPARRAL CITY WATER COMPANY )  
FOR A DETERMINATION OF THE )  
CURRENT FAIR VALUE OF ITS UTILITY )  
PLANT AND PROPERTY AND FOR )  
INCREASE IN ITS RATES AND CHARGES )  
BASED THEREON )  
\_\_\_\_\_)

SURREBUTTAL

TESTIMONY

OF

GERALD BECKER

EXECUTIVE CONSULTANT

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

FEBRUARY 7, 2014

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**EXECUTIVE SUMMARY  
CHAPARRAL CITY WATER COMPANY  
DOCKET NO. W-02113A-13-0118**

Chaparral City Water Company ("CCWC" or "Company") states that it experienced an \$889,596 test year operating income resulting in a 3.26 percent rate of return. CCWC proposes a revenue increase of \$3,141,028 or 34.84 percent over the Company proposed test year revenues of \$9,014,985 to \$12,156,013. The Company's proposed revenue increase would produce an operating income of \$2,783,254 for a 10.21 percent rate of return on an original cost rate base ("OCRB") of \$27,269,321. The Company proposes to use OCRB as its fair value rate base.

Staff recommends a revenue increase of \$1,318,719 or 14.63 percent over the test year revenues of \$9,014,985 to \$10,333,705. The Staff recommended revenue increase would produce an operating income of \$2,139,065 for a 7.90 percent rate of return on a Staff adjusted OCRB of \$27,076,778.

I address the specific issues listed below that were discussed in the rebuttal testimony of the Company witness. I also sponsor the schedules attached to my surrebuttal testimony.

1. Post Test Year Plant – Staff agrees with most of the items of post-test year plant as reflected in the Company's rebuttal position.
2. Accumulated Depreciation and Fully Depreciated Plant – Staff has recalculated its Accumulated Depreciation Reserve balance and has changed its treatment of some plant investments previously treated as being fully depreciated.
3. Working Capital – Staff agrees with the Company's position that interest payments are subject to a lag of 91.25 days instead of the 106.25 days and Staff has made a minor correction to the Customer Accounting Expense balance captured in Staff's Cash Working Capital Allowance calculations. Staff has adjusted its cash working capital calculation accordingly.
4. Incentive Compensation – Staff has not adjusted its initial recommended disallowance, as the Company has yet to support the balance. Further, Staff has disallowed certain Contributions, Dues, Memberships payments allocated from the parent level.
5. Depreciation and Amortization Expense – Staff has recalculated Depreciation Expense to reflect the removal of some plant that was previously treated as fully depreciated and made minor corrections to the amortization of Contributions in Aid of Construction.
6. Rate Design – Staff has not fundamentally changed its rate design.

1 **INTRODUCTION**

2 **Q. Please state your name, occupation, and business address.**

3 A. My name is Gerald Becker. I am an Executive Consultant III employed by the Arizona  
4 Corporation Commission ("Commission") in the Utilities Division ("Staff"). My business  
5 address is 1200 West Washington Street, Phoenix, Arizona 85007.

6  
7 **Q. Are you the same Gerald Becker who previously submitted direct testimony in this**  
8 **case?**

9 A. Yes, I am.  
10

11 **PURPOSE OF SURREBUTTAL TESTIMONY**

12 **Q. What is the purpose of your surrebuttal testimony in this proceeding?**

13 A. The purpose of my surrebuttal testimony in this proceeding is to respond, on behalf of  
14 Staff, to the rebuttal testimony of Ms. Sheryl Hubbard, who represents Chaparral City  
15 Water Company ("CCWC" or "Company").  
16

17 **Q. Do you attempt to address every issue raised by the Company in its rebuttal**  
18 **testimony?**

19 A. No. I limit my discussion to certain issues as outlined below. My silence on any  
20 particular issue raised in the Company's rebuttal testimony does not indicate that Staff  
21 agrees with the Company's stated rebuttal position on the issue. I rely on my direct  
22 testimony unless modified by this surrebuttal testimony.  
23

**SUMMARY OF RECOMMENDED REVENUES**

**Q. Please summarize Staff's recommended revenue.**

A. Staff recommends a revenue increase of \$1,318,719 or 14.63 percent increase over test year revenue of \$9,014,985 to \$10,333,705. The total annual revenue of \$10,333,705 produces an operating income of \$2,139,065 for a 7.90 percent rate of return on an original cost rate base of \$27,076,778. (In Staff's direct testimony Staff recommended a revenue increase of \$1,033,235 or 11.46 percent over the test year revenues of \$9,014,985 to \$10,048,220 for an 8.00 percent rate of return on a Staff adjusted OCRB of \$25,166,359.)

**Q. Has the weighted average cost of capital ("WACC") used to develop the revenue requirement in Staff's direct testimony changed from the WACC in Staff's surrebuttal testimony?**

A. Yes. Staff's recommended WACC is reduced from the 8.0 percent reflected in my direct testimony filed on December 18, 2013, to 7.9 percent in this filing. The WACC change is supported by Staff witness Mr. Cassidy.

**RATE BASE**

**Q. Please summarize Staff's adjustments to the Company's rate base shown on Surrebuttal Schedule GWB-3.**

A. Staff recommends a reduction of \$192,543 to rate base from \$27,269,321 proposed by the Company in its application to \$27,076,778.

*Rate Base Adjustment No. 2 – Post-Test Year Plant*

**Q. Did Staff review the Company's rebuttal testimony regarding the Post-Test Year Plant?**

**A. Yes.**

**Q. Does Staff now agree with the Company?**

**A. Yes, but with one exception, Staff now agrees with the Company's rebuttal position which increases post-test year plant from \$3,884,763 in its original Application to \$4,579,953. As discussed in its direct testimony, Staff continues to recommend disallowance of one-half of the cost of a comprehensive planning study, or \$109,716 to reflect that part of the study related to certain items of plant such as Well No. 11 that are no longer in service.**

**Q. What is Staff's recommendation for post-test year plant?**

**A. Staff recommends post-test year plant in the amount of \$4,470,237 (\$4,579,953 less \$109,716), as shown in Surrebuttal Schedule GWB-6. This results in an increase of \$585,474 to plant as shown in Surrebuttal Schedule GWB-4.**

*Rate Base Adjustment No. 3 – Recalculation of Utility Plant in Service ("UPIS") and Accumulated Depreciation*

**Q. Did Staff review the Company's rebuttal testimony concerning UPIS and Accumulated Depreciation?**

**A. Yes.**



1 **Q. Does Staff agree with the Company's rebuttal position?**

2 A. Yes. Staff agrees with the Company's position that the beginning balance used by Staff  
3 did not remove \$487,750 of accumulated depreciation related to general office plant  
4 allocated from CCWC's previous owner.

5  
6 Staff also agrees to record one half year of accumulated depreciation on Staff's  
7 recommend post-test year plant, or \$65,666 in Surrebuttal Schedules GWB-4 and GWB-7.

8  
9 **Q. What is Staff's current recommendation?**

10 A. Staff recommends Accumulated Depreciation balance of \$25,799,789 as shown in  
11 Surrebuttal Schedules GWB-4 and GWB-7.

12  
13 *Rate Base Adjustment No. 5 – Working Capital*

14 **Q. Did Staff review the Company's rebuttal testimony concerning the adjustment to**  
15 **working capital?**

16 A. Yes.

17  
18 **Q. Does Staff agree?**

19 A. Yes. Staff adopts the Company's rebuttal position to use 91.25 lag days for interest  
20 expense. Staff also updates the balance in its customer accounting expense to reflect  
21 additional bad debt expense that is expected to occur with increased revenues.

22  
23 **Q. What is Staff's recommendation for the overall adjustment to working capital?**

24 A. The above changes are reflected on Surrebuttal Schedule GWB-9 which provides the  
25 calculations of Staff's recommended cash working capital. Staff recommends a reduction

1 to working capital of \$114,187 from \$1,009,341 to \$895,154 as shown on Surrebuttal  
2 Schedules GWB-4 and GWB-9.

3  
4 **OPERATING INCOME**

5 *Operating Income Adjustment No. 2 – Incentive Compensation and Contributions and Dues*

6 **Q. Did Staff review the Company's rebuttal testimony concerning the adjustment to**  
7 **incentive compensation included as part of the parent's corporate allocation?**

8 A. Yes.

9  
10 **Q. Does Staff agree?**

11 A. No. Staff continues to recommend disallowance of \$89,157 of incentive compensation  
12 paid by the Company's parent. In its rebuttal testimony, CCWC states that a 10 percent  
13 adjustment is appropriate because only 10 percent of the incentive compensation is based  
14 on financial performance of the Company while the remaining 90 percent is based on  
15 operational goals such as health and safety, operational efficiency and customer service.

16  
17 Staff disagrees with the Company's rebuttal position for two reasons. First, Staff has  
18 requested, but the Company has yet to support, the calculations used to award the \$89,157  
19 of incentive compensation which was related to the attainment of certain operational and  
20 financial goals. Absent a review of the underlying calculations, it would be improper to  
21 simply assume that the 10 percent provision in a plan equates to 10 percent of the actual  
22 payout. While the attainment of certain financial performance goals might represent 10  
23 percent of the *planned* payout of incentive compensation, the plan does not necessarily  
24 result in 10 percent of the actual amounts paid being for the attainment of financial goals.  
25 For example, if total possible or planned incentive compensation was authorized at \$100  
26 of which \$10 related to financial performance and \$90 related to operational goal, but

1 actual performances result in a total lower payment such as \$50 or even just the \$10, then  
2 the amounts attributable to respective particular goals are unclear. Since the information  
3 provided by the Company is limited to the amount paid and not its derivation, Staff is  
4 unable to calculate the part attributable to the financial performance versus operational  
5 goals. Second, Staff recommends that the attainment of operational goals results in  
6 benefits to both the ratepayers and the Company.

7  
8 Staff recommends disallowance of the entire amounts of incentive compensation  
9 attributable the Company's financial performance, and Staff would further recommend  
10 sharing of the incentive compensation based on the attainment of operational goals. Staff  
11 continues to recommend disallowance of the \$89,517 of incentive compensation, pending  
12 review of the Company's support for the payments.

13  
14 **Q. Does Staff have additional recommendations regarding the Company's Corporate**  
15 **Expense Allocation?**

16 A. In response to Staff data request GB 3.17, the Company indicated that it had included  
17 \$17,721 for expenses not necessary for the provision of service. These allocated expenses  
18 included but are not limited to, memberships, sponsorships, awards and gifts. Adding the  
19 \$17,721 to the \$89,517 eliminated for incentive compensation equals the \$107,238 Staff  
20 recommends be removed from Corporate Allocation expense.

21  
22 **Q. What is Staff's recommendation for the overall adjustment to Corporate**  
23 **Allocations?**

24 A. Staff recommends a total reduction of \$107,238 from \$500,330 to \$393,092, as shown on  
25 Surrebuttal Schedules GWB-11 and GWB-13.

*Operating Income Adjustment No. 3 – Depreciation and Amortization Expense*

**Q. Did Staff review the Company's rebuttal testimony concerning the adjustment for Depreciation and Amortization Expense?**

A. Yes.

**Q. Does Staff agree?**

A. Partially. Staff agrees that based on its calculation of Accumulated Depreciation, Account 340 Office Furniture and Equipment does not include any plant that would be considered to be fully depreciated based on an analysis using a vintage year approach. Staff no longer includes a fully depreciated amount for this account. However, Staff continues to disagree with the Company and treats parts of other plant accounts as fully depreciated, as shown on lines 11 and 22 in Surrebuttal Schedule GWB-16.

Staff also corrects its calculation of amortization expense to exclude both accounts with a zero depreciation rate, as shown on line 30 in Surrebuttal Schedule GWB-16.

Since Staff is recognizing additional post-test year plant as discussed above, Staff updates its calculation for those changes.

**Q. Does Staff agree with the Company's position not to recognize fully depreciated plant and remove those items from its calculation of depreciation expense?**

A. No. The Company's argument is that it disagrees because to the best of its knowledge, Staff has not taken issue with the group method approach. Staff did take this approach in New River Water Company, Docket No. W-01737A-12-0478. The Company also cites to "Accounting for Public Utilities" and quotes:

1           “The group concept has been an integral part of utility depreciation  
2           accounting practice for many years. . . . Under the group concept, no  
3           attempt is made to keep track of the depreciation reserve applicable to  
4           *individual items* [emphasis added] of property. This does not imply any  
5           loss of control, but rather is a practical approach for utilities because they  
6           possess millions of items of property.

7  
8           Under the vintage year method, accumulated depreciation on individual items of plant  
9           investment is not tracked separately, but rather an investment vintage year is assigned to  
10          the annual additions to plant included in a given NARUC account number. By assigning  
11          identifying years to the annual plant additions, Staff can determine the approximate age,  
12          respective costs, and total recovery through depreciation expense of the amounts included  
13          in each NARUC balance supporting the Utility Plant in Service (“UPIS”) balance.

14  
15       **Q.     In Staff’s opinion, would tracking the vintage year associated with annual plant**  
16       **investment be a difficult task?**

17       A.     No. Staff is not aware of any reason that identifying the year of plant investment  
18          purchases would be difficult from an accounting perspective, or excessively time  
19          consuming.

20  
21       **Q.     Please describe Staff’s analysis.**

22       A.     Staff reviewed the plant investment information from the Company’s prior rate case and  
23          determined the amount of UPIS and Accumulated Depreciation for each by NARUC plant  
24          account. The amounts approved in the last rate case were assigned a vintage year of 2006,  
25          the test year in the prior proceeding. Using the additions, deletions and adjustments data  
26          provided by the Company in response to several data requests, Staff performed a roll  
27          forward of UPIS and Accumulated Depreciation by year and determined that certain items  
28          of plant owned by the Company in 2006 are fully depreciated, and fully recovered through  
29          rates. In its direct testimony, Staff identified three NARUC plant accounts which it

1 believed were fully depreciated. However, Staff has now concluded only two accounts  
2 include fully depreciated plant, as shown on lines 11 and 23 on Surrebuttal Schedule  
3 GWB-16.

4  
5 **Q. Does Staff have any other concerns regarding the schedules provided by the**  
6 **Company in support of its rebuttal position?**

7 A. Yes. In its testimony, the Company states that it disagrees with the use of vintage year  
8 method to calculate depreciation expense but calculates its Accumulated Depreciation  
9 balance that, at least in part, uses that methodology.

10  
11 On Company rebuttal schedule B-2, page 1, the Company proposes Accumulated  
12 Depreciation of \$25,773,188 which consists of \$25,692,541 related to its plant at the end  
13 of the test year, plus \$80,647 to reflect one half year of Accumulated Depreciation on its  
14 post-test year plant, as shown on Company rebuttal schedule B-2, page 3. In support of  
15 the \$25,692,541 related to plant actually in service at the end of the test year, the  
16 Company provides a roll forward schedule included as Exhibit SLH-2R, pages 1 through  
17 16. As shown on page 15 of 16 of Exhibit SLH-2R, the Company applies a vintage year  
18 approach to account 341, Transportation Equipment. In plant account 341, Transportation  
19 Equipment, the Company calculates 2012 depreciation expense of \$36,910 on an average  
20 plant balance of \$435,824 (December 31, 2011 balance of \$456,043 plus December 31,  
21 2012 balance of \$417,313, divided by 2), or 8.47 percent which compares with the 20.00  
22 percent depreciation rate for this account, as shown on line 22 in Surrebuttal Schedule  
23 GWB-16. One of the reasons to explain this is that as indicated on page 15 of Exhibit  
24 SLH-2R, the Company uses the vintage year approach for this account and proposes only  
25 \$26,968 of depreciation expense for its 2006 vintage year plant which was valued at  
26 \$385,355 at December 31, 2011 and \$334,975 on December 31, 2012, for an average of

1           \$360,165 which multiplied by 20.00 percent would have resulted in depreciation expense  
2           of \$72,033 for this item.

3  
4           Further review of Exhibit SLH-2R indicates that the Company adds 2012 depreciation  
5           expense of \$36,910 for plant account 341, Transportation Equipment to the December 31,  
6           2011 accumulated depreciation of \$456,043, and subtracts accumulated depreciation of  
7           \$77,348 related to 2012 retirements, for accumulated depreciation of \$415,605 at the end  
8           of December 31, 2012. The Company includes \$415,605 for this account to compute total  
9           accumulated depreciation of \$25,692,540 for plant actually in service at December 31,  
10          2012.

11  
12          Staff further determined that if the Company had calculated 2012 depreciation expense for  
13          plant account 341, Transportation Equipment consistent with the Company's proposed  
14          group method, this account would be fully depreciated, except for \$9,637 of post-test plant  
15          as shown line 26 in Surrebuttal Schedule GWB-6. Adoption of the Company's proposal  
16          would result in the annual recovery of \$85,390 of depreciation expense each year until the  
17          next rate case on a net (post-test year) investment in UPIS of \$9,637. The \$85,390 is  
18          based on the final balance in account 341, Transportation Equipment of \$426,950,  
19          multiplied by a 20.00 percent depreciation rate, as shown on line 26 in Surrebuttal  
20          Schedule GWB-16. This over recovery of investment in UPIS would represent a very  
21          significant inequity to the ratepayers.

22  
23       **Q.     What does Staff recommend?**

24       **A.**     Staff recommends a reduction of \$438,766 from \$2,014,048 to \$1,575,282 of Depreciation  
25           and Amortization Expense as shown in Surrebuttal Schedules GWB-11 and GWB-16.  
26           Staff also recommends accumulated depreciation of \$25,799,789 as discussed above and

1           calculated based on consistent application of the vintage year method. Staff also requests  
2           that the Company revisit the schedule contained in Exhibit SLH-2R and update as  
3           necessary for inclusion in any rejoinder testimony that the Company may file.  
4

5       **RATE DESIGN**

6       **Q.     Did Staff review the Company's Rebuttal Testimony concerning rate design?**

7       A.     Yes.  
8

9       **Q.     Does Staff agree?**

10      A.     No. Staff has not changed the fundamentals of its rate design.  
11

12      **Q.     Does this conclude your Surrebuttal Testimony?**

13      A.     Yes, it does.



**SURREBUTTAL TESTIMONY OF GERALD BECKER**

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REVENUE REQUIREMENT

LINE NO.	DESCRIPTION	(A) COMPANY ORIGINAL COST	(B) COMPANY FAIR VALUE	(C) STAFF ORIGINAL COST	(D) STAFF FAIR VALUE
1	Adjusted Rate Base	\$ 27,269,321	\$ 27,269,321	\$ 27,076,778	\$ 27,076,778
2	Adjusted Operating Income (Loss)	\$ 889,596	\$ 889,596	\$ 1,339,452	\$ 1,339,452
3	Current Rate of Return (L2 / L1)	3.26%	3.26%	4.95%	4.95%
4	Required Rate of Return	10.21%	10.21%	7.90%	7.90%
5	Required Operating Income (L4 * L1)	\$ 2,783,254	\$ 2,783,254	\$ 2,139,065	\$ 2,139,065
6	Operating Income Deficiency (L5 - L2)	\$ 1,893,658	\$ 1,893,658	\$ 799,614	\$ 799,614
7	Gross Revenue Conversion Factor	1.658709	1.658709	1.649195	1.649195
8	Required Revenue Increase (L7 * L6)	\$ 3,141,028	\$ 3,141,028	<b>\$ 1,318,719</b>	<b>\$ 1,318,719</b>
9	Adjusted Test Year Revenue	\$ 9,014,985	\$ 9,014,985	\$ 9,014,985	\$ 9,014,985
10	Proposed Annual Revenue (L8 + L9)	\$ 12,156,013	\$ 12,156,013	\$ 10,333,705	\$ 10,333,705
11	Required Increase in Revenue (%)	34.84%	34.84%	14.63%	14.63%
12	Rate of Return on Common Equity (%)	11.05%	11.05%	9.60%	9.60%

References:

Column [A]: Company Schedule A-1

Column (B): Company Schedule A-1

Column (C): Staff Schedules GWB-2, GWB-3, and GWB-10

GROSS REVENUE CONVERSION FACTOR

LINE NO.	DESCRIPTION	(A)	(B)	(C)
<u>Calculation of Gross Revenue Conversion Factor:</u>				
1	Revenue	100.0000%		
2	Uncollectible Factor (Line 11)	0.5492%		
3	Revenues (L1 - L2)	99.4508%		
4	Combined Federal and State Income Tax and Property Tax Rate (Line 23)	38.8152%		
5	Subtotal (L3 - L4)	60.6356%		
6	Revenue Conversion Factor (L1 / L5)	1.649195		
<u>Calculation of Uncollectible Factor:</u>				
7	Unity	100.0000%		
8	Combined Federal and State Tax Rate (Line 17)	38.2900%		
9	One Minus Combined Income Tax Rate (L7 - L8)	61.7100%		
10	Uncollectible Rate	0.8900%		
11	Uncollectible Factor (L9 * L10)		0.54922%	
<u>Calculation of Effective Tax Rate:</u>				
12	Operating Income Before Taxes (Arizona Taxable Income)	100.0000%		
13	Arizona State Income Tax Rate	6.5000%		
14	Federal Taxable Income (L12 - L13)	93.5000%		
15	Applicable Federal Income Tax Rate (Line 44)	34.0000%		
16	Effective Federal Income Tax Rate (L14 x L15)	31.7900%		
17	Combined Federal and State Income Tax Rate (L13 + L16)		38.2900%	
<u>Calculation of Effective Property Tax Factor</u>				
18	Unity	100.0000%	6.968%	
19	Combined Federal and State Income Tax Rate (L17)	38.2900%		
20	One Minus Combined Income Tax Rate (L18-L19)	61.7100%		
21	Property Tax Factor (GWB-18, L25)	0.8510%		
22	Effective Property Tax Factor (L20*L21)		0.5252%	
23	Combined Federal and State Income Tax and Property Tax Rate (L17+L22)			38.8152%
24	Required Operating Income (Schedule GWB-1, Line 5)	\$ 2,139,065		
25	Adjusted Test Year Operating Income (Loss) (Schedule GWB-10, Line 36)	\$ 1,339,452		
26	Required Increase in Operating Income (L24 - L25)		\$ 799,614	
27	Income Taxes on Recommended Revenue (Col. (C), L48)	\$ 974,439		
28	Income Taxes on Test Year Revenue (Col. (A), L48)	\$ 478,293		
29	Required Increase in Revenue to Provide for Income Taxes (L27 - L28)		\$ 496,147	
30	Required Revenue Increase (Schedule GWB-1, Line 8)	\$ 1,318,719		
31	Uncollectible Rate (Line 10)	0.8900%		
32	Uncollectible Expense on Recommended Revenue (L30 * L31)	\$ 11,737		
33	Adjusted Test Year Uncollectible Expense - N/A	\$ -		
34	Required Increase in Revenue to Provide for Uncollectible Exp.		\$ 11,737	
35	Property Tax with Recommended Revenue (GWB-18, Line 21)	\$ 243,434		
36	Property Tax on Test Year Revenue (GWB-18, Col A, L19)	\$ 232,211		
37	Increase in Property Tax Due to Increase in Revenue (L35-L36)		\$ 11,222	
38	Total Required Increase in Revenue (L26 + L29 + L34+ L37)		\$ 1,318,719	
		(A) Test Year	(B)	(C) Staff Recommended
<u>Calculation of Income Tax:</u>				
39	Revenue (Sch GWB-10, Col.(C) L4, GWB-1, Col. (D), L10)	\$ 9,014,985		\$ 10,333,705
40	Operating Expenses Excluding Income Taxes	\$ 7,197,241		\$ 7,220,200
41	Synchronized Interest (L53)	\$ 568,612		\$ 568,612
42	Arizona Taxable Income (L39 - L40 - L41)	\$ 1,249,132		\$ 2,544,892
43	Arizona State Income Tax Rate	6.5000%		6.5000%
44	Arizona Income Tax (L42 x L43)	\$ 81,194		\$ 165,418
45	Federal Taxable Income (L42 - L44)	\$ 1,167,938		\$ 2,379,474
46	Federal Tax	\$ 397,099		\$ 809,021
47	Total Federal Income Tax	\$ 397,099		\$ 809,021
48	Combined Federal and State Income Tax (L43 + L47)	\$ 478,293		\$ 974,439
50	Effective Tax Rate			
<u>Calculation of Interest Synchronization:</u>				
51	Rate Base (Schedule GWB-3, Col. (C), Line 18)			N/A
52	Weighted Average Cost of Debt			\$ 27,076,778
53	Synchronized Interest (L50 X L51)			2.1000%
				\$ 568,612

**RATE BASE - ORIGINAL COST**

LINE NO.	(A) COMPANY AS FILED	(B) STAFF ADJUSTMENTS	(C) STAFF AS ADJUSTED
1 Plant in Service	\$ 69,502,064	\$ 595,207	\$ 70,097,271
2 Less: Accumulated Depreciation	25,734,123	65,666	25,799,789
3 Net Plant in Service	<u>\$ 43,767,941</u>	<u>\$ 529,541</u>	<u>\$ 44,297,482</u>
<u>LESS:</u>			
4 Contributions in Aid of Construction (CIAC)	\$ 14,991,871	\$ -	\$ 14,991,871
5 Less: Accumulated Amortization	2,529,950	-	2,529,950
6 Net CIAC	<u>12,461,921</u>	<u>-</u>	<u>12,461,921</u>
7 Advances in Aid of Construction (AIAC)	4,008,916	-	4,008,916
8 Customer Meter Deposits	1,950		1,950
9 Deferred Income Taxes	1,271,696		1,271,696
10 FHSD Settlement	449,580		449,580
<u>ADD:</u>			
11 Working Capital Allowance	1,009,341	(114,187)	895,154
12 Deferred Debits	686,104	(607,898)	78,206
13 Original Cost Rate Base	<u><u>\$ 27,269,321</u></u>	<u><u>\$ (192,543)</u></u>	<u><u>\$ 27,076,778</u></u>

References:

Column (A), Company Schedule B-2  
Column (B): Schedule GWB-4  
Column (C): Column (A) + Column (B)

SUMMARY OF ORIGINAL COST RATE BASE ADJUSTMENTS

LINE NO.	ACCT. NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] Reclassification ADJ #1 GWB-5	[C] Post Test Year Plant ADJ #2 GWB-6	[E] UPIS & ACC. DEPREC. ADJ #3 GWB-7	[F] ADFUC Deferral ADJ #4 GWB-8	[G] Working Capital ADJ #5 GWB-9	[I] STAFF ADJUSTED
<u>PLANT IN SERVICE:</u>									
1	303	Other Intangible Plant	1,282,734	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,282,734
2	303	Land and Land Rights	271,857						271,857
3	304	Structures and Improvements - Pumping	190,044						190,044
4	304	Structures and Improvements - Treatment	593,063						593,063
5	304	Structures and Improvements - T & D	169,971						169,971
6	304	Structures & Improvements - General	826,312		168,610	(594)			994,328
7	305	Collecting and Impounding Reservoirs	1,013,959			(11,800)			1,002,159
8	307	Wells	953,001		(793,374)				159,627
9	309	Supply Mains	2,201,526						2,201,526
10	311	Pumping Equipment & Other Pumping Plant	6,056,668		(130,000)	49,378			5,976,046
11	320.1	Water Treatment Equipment	6,960,463		741,809	6,946			7,709,217
12	330	Reservoirs and Tanks	6,235,113	(6,235,113)					-
13	330.1	Storage Tanks		6,235,113	(575,439)	2,667			5,662,341
14	331	Transmission and Distribution Mains	24,744,309		838,725	9,132			25,592,166
15	333	Services	11,300,767		150,079	16,750			11,467,597
16	334	Meters	3,216,068		(181,450)	3,556			3,038,174
17	335	Hydrants	2,029,913		45,030	11,047			2,085,990
18	339	Other Transmission & Distribution Plant	132,558		(22,842)	41,221			150,937
19	339	Other Transmission & Distribution Plant	143,521						143,521
20	340	Office Furniture and Equipment, Computers,	305,068						305,068
21	341	Transportation Equipment	503,910		389	(77,349)			426,950
22	343	Power Operated Equipment & Tool, Shop an	222,439		189,169				411,608
23	345	Power Operated Equipment	0						-
24	346	Communication Equipment	102,326		154,768				257,094
25	347	Other General Plant	41,221			(41,221)			0
26		Company's reconciling Adjustment	5,253						5,253
27	Total Plant in Service		69,502,064	(0)	585,474	9,733			70,097,271
28									
29	Accumulated Depreciation		25,734,123			65,666			25,799,789
30	Net Plant in Service		\$ 43,767,941	\$ (0)	\$ 585,474	\$ (55,932)	\$ -	\$ -	\$ 44,297,482
31									
32	<u>LESS:</u>								
33	Contributions in Aid of Construction (CIAC)		\$ 14,991,871						\$ 14,991,871
34	Less: Accumulated Amortization		2,529,950						2,529,950
35	Net CIAC (L63 - L64)		12,461,921						12,461,921
36	Advances in Aid of Construction (AIAC)		4,008,916						4,008,916
37	Customer Meter Deposits		1,950						1,950
38	Deferred Income Taxes		1,271,696						1,271,696
39	FHSD Settlement		449,580						449,580
40	<u>ADD:</u>								
41	Working Capital Allowance		1,009,341					(114,187)	895,154
42	Deferred Debits		686,104				(607,898)		78,206
43	Original Cost Rate Base		\$ 27,269,321	\$ (0)	\$ 585,474	\$ (55,932)	\$ (607,898)	\$ (114,187)	\$ 27,076,778

Chaparral City Water Company  
Docket No. W-02113A-13-0118  
Test Year Ended December 31, 2012

Schedule GWB-5  
SURREBUTTAL

**RATE BASE ADJUSTMENT #1 RECLASSIFICATION**

LINE NO.	ACCT NO.	Description	[A] COMPANY AS FILED	[B] STAFF ADJUSTMENTS	[C] STAFF AS ADJUSTED
1	330	Reservoirs and Tanks	6,235,113	(6,235,113)	-
	330.1	Storage Tanks	-	6,235,113	6,235,113

References:

Column [A] : Amount reflected in Acct. 330, Reservoirs and Tanks

Column [B] , Col [C] less Col [A]

Column [C] , Per testimony GWB

**RATE BASE ADJUSTMENT #2 POST TEST YEAR PLANT**

LINE NO.	ACCT NO. & DESCRIPTION OF PROJECT	[A] ORIGINAL PROJECT ESTIMATES	[B] STAFF AS ADJUSTED	[C] STAFF ADJUSTMENT
1	304500 Office & Ops Center	-	168,610	168,610
2	311000 Electrical Annual Program	130,000	-	(130,000)
3	307000 Well #10 Arsenic Treatment	793,374		(793,374)
4	320.1 Well #10 Arsenic Treatment	-	1,077,467	1,077,467
5	Subtotal (Net Inc.) to Acct. 320.1	793,374	1,077,467	284,093
5	320000 Shea WTP Filter Media	59,369	73,035	13,666
6	320000 Shea WTP Improvements	350,000	676	(349,324)
7	Total Adj to Acct 320.1	1,202,743	1,151,178	(51,565)
8	330000 Reservoir #2 Rehabilitation	595,860	670,421	74,561
9	330000 Lotus Reservoir 3	-	-	-
10	330000 Crestview Reservoir 7	-	-	-
11	330000 2013 Recurring Projects - Facilities	650,000	-	(650,000)
12	Total Adj to 330.1	1,245,860	670,421	(575,439)
13	331001 Distribution System	53,577	66,964	13,387
14	331001 Distribution Improvements	300,000	1,125,338	825,338
15	331001 Misc system improvements	-	-	-
16	331001 Main breaks	-	-	-
17	331001 Manholes replaced	-	-	-
18	331001 Valves new	-	-	-
19	331001 Valves replaced	-	-	-
20	331001 Mains scheduled	-	-	-
21	Total Adj to Acct 331.1	353,577	1,192,302	838,725
22	333000 Services Replaced	410,000	560,079	150,079
23	334100 Meters Replaced	300,000	118,550	(181,450)
24	335000 Hydrants Replaced	10,000	55,030	45,030
25	339600 Comprehensive Planning Study (Chloramination)	132,558	109,716	(22,842)
26	341100 Vehicles	9,248	9,637	389
27	343000 Tools & Equipment	31,777	220,946	189,169
28	343000 Tools & Equipment	-	-	-
29	Total Adj to Acct. 343	31,777	220,946	189,169
30	346000 ESRI Project (GIS)	-	-	-
31	346200 IPT Deployment	59,000	213,768	154,768
32	346200 Scada & Firewall	-	-	-
	Total Adj to Acct. 346	59,000	213,768	154,768
33	347000 Security	-	-	-
34	Comprehensive Planning Study (Well 11 Restoration)	-	-	-
35	Comprehensive Planning Study	-	-	-
36	Reservoir #2 Rehabilitation	-	-	-
37	Reservoir #2 Rehabilitation	-	-	-
38	Developer Funded	-	-	-
39	Totals	3,884,763	4,470,237	585,474

**References:**

Column [A] : Amount per Company application and response to Staff DR

Column [B] , Col [C] less Col [A]

Column [C] : Amount per Company response to Staff DR and Testimony GWB

RATE BASE ADJUSTMENT #3 UTILITY PLANT IN SERVICE AND ACCUMULATED DEPRECIATION

Line No.	Sub. Acct.	Description	Company Application E-5 Plant Balance 12/31/2012	Company Subtotal	Staff	Adjustment	Staff Calculated Accum Depreciations	Fully Depreciated
1	303100	Other Intangible Plant	-	-	-	-	-	-
2	303600	Land and Land Rights	1,554,591	1,554,591	1,554,591	-	-	-
3	304200	Structures and Improvements - P	190,044					
4	304300	Structures and Improvements - T	593,063					
5	304400	Structures and Improvements - T	169,971					
6	304500	Structures & Improvements - Ger	826,312	1,779,390	1,778,796	(594)	687,608	
7	305000	Collecting and Impounding Reser	1,019,211	1,019,211	1,007,411	(11,800)	457,368	
8	307000	Wells	159,628	159,628	159,627	(1)	108,329	
9	309000	Supply Mains	2,201,526	2,201,526	2,201,526	-	938,965	
10	311000	Pumping Equipment & Other Pun	5,926,668	5,926,668	5,976,046	49,378	4,868,619	3,365,052
11	320100	Water Treatment Equipment	6,551,094	6,551,094	6,558,040	6,946	1,513,186	
12	330000	Reservoirs and Tanks	4,989,253	4,989,253	4,991,920	2,667	1,636,582	
13	331001	Transmission and Distribution Ma	24,390,732	24,390,732	24,399,864	9,132	9,619,484	
14	333000	Services	10,890,767	10,890,767	10,907,517	16,750	2,532,141	
15	334100	Meters	2,916,068	2,916,068	2,919,624	3,556	2,374,387	
16	335000	Hydrants	2,019,913	2,019,913	2,030,960	11,047	387,168	
18	339100	Other Transmission & Distribution	143,521	143,521	184,742	41,221	39,870	
19	340100	Office Furniture and Equipment, i	305,068	305,068	305,067	(1)	152,715	
20	341100	Transportation Equipment	494,662	494,662	417,313	(77,349)	415,605	400,233
21	343000	Power Operated Equipment & To	190,662	190,662	190,661	(1)	41,094	
22	345000	Power Operated Equipment	-	-	-	-	-	
23	346200	Communication Equipment	43,326	43,326	43,327	1	26,668	
24	347000	Other General Plant	41,221	41,221	-	(41,221)	-	
26	Total		\$ 65,617,302	\$ 65,617,301	\$ 65,627,032	\$ 9,731	\$ 25,799,789	\$ 3,765,285

See Note

Note: Some \$1 adjustments waived, plus rounding, net adjustment of \$9,733 on GWB-4



Chaparral City Water Company  
Docket No. W-02113A-13-0118  
Test Year Ended December 31, 2012

Schedule GWB-8  
SURREBUTTAL

**RATE BASE ADJUSTMENT #4 REVERSAL OF AFUDC AND DEFERRED DEPRECIATION DEFERRAL**

LINE NO.	ACCT NO.	Description	[A] COMPANY AS FILED	[B] STAFF ADJUSTMENTS	[C] STAFF AS ADJUSTED
1		Deferred Debits	607,898	(607,898)	-

References:

Column [A] : Amount reflected on Co Schedule B-2, as part of Deferred Debits  
Column [B] , Col [C] less Col [A]  
Column [C] , Per testimony GWB

RATE BASE ADJUSTMENT #5 CASH WORKING CAPITAL

Line No.	(A) Description	(B) Proforma Test Year Amount	(C) Revenue Lag (Lead) Days	(D) Expense Lag (Lead) Days	(E) Net Lag (Lead) Days Col. C - Col. D	(F) Lead/Lag Factor Col. E/365	(G) Cash Working Capital Required Col. B * Col. F
5	OPERATING EXPENSES						
6	Labor	\$ 1,024,112	34.93	13.09	21.84	0.05983271	\$ 61,275
7	Purchased Water	1,116,879	34.93	43.67	(8.74)	-0.0239481	(26,747)
8	Fuel & Power	\$ 585,139	34.93	27.86	7.07	0.01936695	11,332
9	Chemicals	\$ 115,182	34.93	(79.22)	114.15	0.31273681	36,022
10	Waste Disposal	\$ 7,113	34.93	41.90	(6.97)	-0.0190988	(136)
11	Intercompany Support Services	\$ 94,150	34.93	29.99	4.94	0.01353134	1,274
12	Corporate Allocation	\$ 393,092	34.93	30.00	4.93	0.01350394	5,308
13	Outside Services	\$ 508,106	34.93	88.00	(53.07)	-0.1454002	(73,879)
14	Group Insurance	\$ 178,067	34.93	12.00	22.93	0.06281901	11,186
15	Pensions	\$ 85,086	34.93	67.98	(33.05)	-0.0905509	(7,705)
16	Insurance Other Than Group	\$ 73,025	34.93	(26.14)	61.07	0.16731216	12,218
17	Customer Accounting	\$ 330,695	34.93	26.53	8.40	0.02301079	7,610
18	Rents	\$ 1,504	34.93		34.93	0.09569572	144
19	General Office Expense	\$ 164,179	34.93	39.69	(4.76)	-0.013044	(2,142)
20	Miscellaneous	\$ 158,553	34.93	(3.22)	38.15	0.10451764	16,572
21	Maintenance Expense	\$ 388,614	34.93	17.28	17.65	0.04835325	18,791
22	Intest Expense <sup>1</sup>	\$ 568,612	34.93	91.25	(56.32)	-0.1543043	(87,739)
24	TAXES						
25	General Taxes-Property <sup>1</sup>	\$ 243,434	34.93	213.96	(179.0294)	(0.4905)	\$ (119,402)
26	General Taxes-Other	\$ 86,320	34.93	3.03	31.8989	0.0874	7,544
27	Income Tax <sup>1</sup>	\$ 974,439	34.93	37.00	(2.0711)	(0.0057)	(5,529)
28	TOTAL	\$ 7,096,303					<u>\$ (134,003)</u>

CASH WORKING CAPITAL REQUIREMENT

<sup>1</sup>At proposed rates.

	Per Co	Per Staff	Adjustment
34 Cash Working Capital Requirement	\$ (19,817)	\$ (134,003)	\$ (114,187)
35 Required Bank Balances	780,673	780,673	-
36 Prepayments	248,484	248,484	-
37 Total Working Capital Allowance	1,009,341	895,154	(114,187)

OPERATING INCOME STATEMENT - TEST YEAR AND STAFF RECOMMENDED

LINE NO.	DESCRIPTION	[A] COMPANY TEST YEAR AS FILED	[B] STAFF TEST YEAR ADJUSTMENTS	[C] STAFF TEST YEAR AS ADJUSTED	[D] STAFF RECOMMENDED CHANGES	[E] STAFF RECOMMENDED
	<b>Revenues</b>	\$ -	\$ -	\$ -	\$ -	\$ -
1	Water Revenues	8,915,656	-	8,915,656	1,318,720	10,234,376
2	Other Revenues	99,329	-	99,329	-	99,329
3		-	-	-	-	-
4	<b>Total Operating Revenues</b>	<b>\$ 9,014,985</b>	<b>\$ -</b>	<b>\$ 9,014,985</b>	<b>\$ 1,318,720</b>	<b>\$ 10,333,705</b>
	<b>Operating Expenses</b>					
5	Labor	\$ 1,024,112	\$ -	\$ 1,024,112	\$ -	\$ 1,024,112
6	Purchased Water	1,065,953	50,926	1,116,879	-	1,116,879
7	Fuel & Power	605,885	(20,746)	585,139	-	585,139
8	Chemicals	119,266	(4,084)	115,182	-	115,182
9	Waste Disposal	7,113	-	7,113	-	7,113
10	Intercompany Support Services	94,150	-	94,150	-	94,150
11	Corporate Allocation	500,330	(107,238)	393,092	-	393,092
12	Outside Services	508,106	-	508,106	-	508,106
13	Group Insurance	178,067	-	178,067	-	178,067
14	Pensions	85,086	-	85,086	-	85,086
15	Regulatory Expense	91,668	-	91,668	-	91,668
16	Insurance Other Than Group	73,025	-	73,025	-	73,025
17	Customer Accounting	318,959	-	318,959	11,737	330,695
18	Rents	1,504	-	1,504	-	1,504
19	General Office Expense	164,179	-	164,179	-	164,179
20	Miscellaneous	158,553	-	158,553	-	158,553
21	Maintenance Expense	388,614	-	388,614	-	388,614
22	Depreciation & Amortization	2,014,048	(438,766)	1,575,282	-	1,575,282
23	General Taxes-Property	251,038	(18,828)	232,210	11,222	243,433
24	General Taxes-Other	86,320	-	86,320	-	86,320
25	Income Taxes	389,412	88,880	478,293	496,147	974,439
26	<b>Total Operating Expenses</b>	<b>\$ 8,125,389</b>	<b>\$ (449,856)</b>	<b>\$ 7,675,534</b>	<b>\$ 519,106</b>	<b>\$ 8,194,639</b>
27	<b>Operating Income (Loss)</b>	<b>\$ 889,596</b>	<b>\$ 449,856</b>	<b>\$ 1,339,452</b>	<b>\$ 799,615</b>	<b>\$ 2,139,065</b>

References:

Column (A): Company Schedule C-1  
Column (B): Schedule GWB 11  
Column (C): Column (A) + Column (B)  
Column (D): Schedules GWB 2, Lines 29, 34 and 37  
Column (E): Column (C) + Column (D)

**SUMMARY OF OPERATING INCOME ADJUSTMENTS - TEST YEAR**

LINE NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] Excess Water Loss ADJ #1 GWB-12	[C] Inc. Comp. ADJ #2 GWB-13	[D] Purchased Water Exp ADJ #3 GWB-14	[E] Deprec. Exp ADJ #5 GWB-16	[F] PROPERTY TAXES ADJ #5 GWB-18	[G] Income Taxes ADJ #6 GWB-17	[H] STAFF ADJUSTED
	<b>Revenues</b>								
1	Water Revenues	\$ 8,915,656	-	-	-	-	-	-	8,915,656
2	Other Revenues	99,329	-	-	-	-	-	-	99,329
3	Total Operating Revenues	<u>\$ 9,014,985</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>		<u>\$ -</u>	<u>\$ 9,014,985</u>
	<b>Operating Expenses</b>								
4	Labor	\$ 1,024,112					\$ -	\$ -	\$ 1,024,112
5	Purchased Water	1,065,953	(39,598)		90,524		-	-	1,116,879
6	Fuel & Power	605,885	(20,746)				-	-	585,139
7	Chemicals	119,266	(4,084)						115,182
8	Waste Disposal	7,113							7,113
9	Intercompany Support Services	94,150							94,150
10	Corporate Allocation	500,330		(107,238)					393,092
11	Outside Services	508,106							508,106
12	Group Insurance	178,067							178,067
13	Pensions	85,086							85,086
14	Regulatory Expense	91,668							91,668
15	Insurance Other Than Group	73,025							73,025
16	Customer Accounting	318,959							318,959
17	Rents	1,504							1,504
18	General Office Expense	164,179							164,179
19	Miscellaneous	158,553							158,553
20	Maintenance Expense	388,614							388,614
21	Depreciation & Amortization	2,014,048				(438,766)	(18,828)		1,575,282
22	General Taxes-Property	251,038							232,210
23	General Taxes-Other	86,320							86,320
24	Income Taxes	389,412						88,880	478,293
25	Total Operating Expenses	<u>\$ 8,125,389</u>	<u>\$ (64,428)</u>	<u>\$ (107,238)</u>	<u>\$ 90,524</u>	<u>\$ (438,766)</u>	<u>\$ (18,828)</u>	<u>\$ 88,880</u>	<u>\$ 7,675,534</u>
26	Operating Income	<u>\$ 889,596</u>	<u>\$ 64,428</u>	<u>\$ 107,238</u>	<u>\$ (90,524)</u>	<u>\$ 438,766</u>	<u>\$ 18,828</u>	<u>\$ (88,880)</u>	<u>\$ 1,339,452</u>

**OPERATING INCOME ADJUSTMENT #1 - EXCESS WATER LOSS**

LINE  
NO.

1	One plus allowable water loss	110.00%
2	One plus actual water loss	113.90%
3	Allowable portion	96.58%
4	Disallowable portion	3.42%
5	Power Expense	\$ 605,885
6	Disallowance	20,746
7	Chemical Expense	\$ 119,266
8	Disallowance	4,084
9	Purchased Water Expense	\$ 1,156,477
10	Disallowance	39,598

Line 1: Maximum acceptable level of water losses

Line 2: Actual level of water losses

Line 3: Line 2 / line 3

Line 4: 1 minus line 4

Lines 5, and 7: Per Schedule GWB-11, Col [A]

Line 9 : Per Schedule GWB-11, Col [A] plus Col [D]

Line 6: Line 5 times line 4

Line 8: Line 7 times line 4

Line 10: Line 9 times line 4

Chaparral City Water Company  
Docket No. W-02113A-13-0118  
Test Year Ended December 31, 2012

Schedule GWB-13  
SURREBUTTAL

**OPERATING INCOME ADJUSTMENT #2 - INCENTIVE COMPENSATION & CONTRIBUTIONS, DUES**

LINE NO.	DESCRIPTION	[A] COMPANY PROPOSED	[B] STAFF ADJUSTMENTS	[C] STAFF RECOMMENDED*
1	Incentive Comp	\$ 89,517	\$ (89,517)	\$ -
2	Contributions and Dues	\$ 17,721	\$ (17,721)	\$ -
	Total Adjustment	\$ 107,238	\$ (107,238)	\$ -

References:

Column (A), Per Company Response to Staff data request

Column (B): Testimony GWB

Column (C): Column (A) + Column (B)

Chaparral City Water Company  
Docket No. W-02113A-13-0118  
Test Year Ended December 31, 2012

Schedule GWB-14  
SURREBUTTAL

**OPERATING INCOME ADJUSTMENT #3 - PURCHASED WATER EXPENSE**

LINE NO.	DESCRIPTION	[A] COMPANY PROPOSED	[B] STAFF ADJUSTMENTS	[C] STAFF RECOMMENDED*
1		\$ 1,065,953	\$ 90,524	\$ 1,156,477

References:

Column (A), Company Workpapers

Column (B): Testimony GWB

Column (C): Column (A) + Column (B), Per Co Response  
to Staff DR 4.4

OPERATING INCOME ADJUSTMENT #4 - DEPRECIATION EXPENSE

LINE NO.	ACCT. NO.	DESCRIPTION	[A] PLANT BALANCE	[B] FULLY DEPRECIATED	[C] DEPRECIABLE AMOUNT	[D] DEPRECIATION RATE	[E] DEPRECIATION EXPENSE
1		<u>PLANT IN SERVICE:</u>					
2	303	Other Intangible Plant	\$ 1,282,734		\$ 1,282,734	0.00%	-
3	303	Land and Land Rights	271,857		271,857	0.00%	-
4	304	Structures and Improvements - Pumping	190,044		190,044	3.33%	6,328
5	304	Structures and Improvements - Treatment	593,063		593,063	3.33%	19,749
6	304	Structures and Improvements - T & D	169,971		169,971	3.33%	5,660
7	304	Structures & Improvements - General	994,328		994,328	3.33%	33,111
8	305	Collecting and Impounding Reservoirs	1,002,159		1,002,159	2.50%	25,054
9	307	Wells	159,627		159,627	3.33%	5,316
10	309	Supply Mains	2,201,526		2,201,526	2.00%	44,031
11	311	Pumping Equipment & Other Pumping Plant	5,976,046	(3,365,052)	2,610,994	12.50%	326,374
12	320.1	Water Treatment Equipment	7,709,217		7,709,217	3.33%	256,717
13	330	Reservoirs and Tanks	-		-	0.00%	-
14	330.1	Storage Tanks	5,662,341		5,662,341	2.22%	125,704
15	331	Transmission and Distribution Mains	25,592,166		25,592,166	2.00%	511,843
16	333	Services	11,467,597		11,467,597	3.33%	381,871
17	334	Meters	3,038,174		3,038,174	8.33%	253,080
18	335	Hydrants	2,085,990		2,085,990	2.00%	41,720
19	339	Other Transmission & Distribution Plant	150,937		150,937	6.67%	10,067
20	339	Other Transmission & Distribution Plant	143,521		143,521	6.67%	9,573
21	340	Office Furniture and Equipment, Computers, Software, Peripherals	305,068		305,068	6.67%	20,348
22	341	Transportation Equipment	426,950	(400,233)	26,717	20.00%	5,343
23	343	Power Operated Equipment & Tool, Shop and Garage Equipment	411,608		411,608	5.00%	20,580
24	345	Power Operated Equipment	-		-	5.00%	-
25	346	Communication Equipment	257,094		257,094	10.00%	25,709
26	347	Other General Plant	0		0	10.00%	0
27		Company's reconciling Adjustment	5,253		5,253		-
28		Total Utility Plant in Service	\$ 70,097,271	\$ (3,765,285)	\$ 66,331,986		\$ 2,128,180
29		Less: Non Depreciable Plant					
30		Other Intangible Plant			1,554,591		
31		Net Depreciable Plant and Depreciation Amounts			\$ 64,777,395		\$ 2,128,180
32							
33		Amortization of CIAC			\$ 14,991,871	3.2854%	492,539
34		Staff Recommended Depreciation Expense					\$ 1,635,641
35		Deferred CAP Amortization					15,641
36		Amortization of Gains on FHSD Settlement					(76,000)
37		Company Proposed Depreciation Expense					\$ 1,575,282
38		Staff Adjustment					2,014,048
							\$ (438,766)

References:

Col [A] Schedule GWB-4  
Col [B] Fully Depreciated Plant, per Testimony  
Col [C] Col [A] less Col [B]  
Col [D] Proposed Rates per Staff Engineering  
Col [E] Col [A] times Col [B]



Chaparral City Water Company  
Docket No. W-02113A-13-0118  
Test Year Ended December 31, 2012

Schedule GWB-17  
SURREBUTTAL

OPERATING INCOME ADJUSTMENT #5 - INCOME TAXES

<u>LINE NO.</u>	<u>DESCRIPTION</u>	<u>[A] COMPANY PROPOSED</u>	<u>[B] STAFF ADJUSTMENTS</u>	<u>[C] STAFF RECOMMENDED</u>
1	Income Taxes	<u>\$ 389,412</u>	<u>\$ 88,880</u>	<u>\$ 478,293</u>

References:

Column (A), Company Schedule C-2

Column (B): Testimony GWB

Column (C): Column (A) + Column (B),  
see also Sch. GWB-2, line 48

OPERATING INCOME ADJUSTMENT #6 - PROPERTY TAX EXPENSE GRCF COMPONENT

LINE NO.	DESCRIPTION	[A] STAFF AS ADJUSTED	[B] STAFF RECOMMENDED
1	Staff Adjusted Test Year Revenues - 2011	\$ 9,014,985	\$ 9,014,985
2	Weight Factor	2	2
3	Subtotal (Line 1 * Line 2)	18,029,971	18,029,971
4	Staff Adjusted Test Year Revenues - 2011	9,014,985	
5	Staff Recommended Revenue		10,333,706
6	Subtotal (Line 4 + Line 5)	27,044,956	28,363,676
7	Number of Years	3	3
8	Three Year Average (Line 5 / Line 6)	9,014,985	9,454,559
9	Department of Revenue Multiplier	2	2
10	Revenue Base Value (Line 7 * Line 8)	18,029,971	18,909,118
11	Plus: 10% of CWIP	161,294	161,294
12	Less: Net Book Value of Licensed Vehicles	-	-
13	Full Cash Value (Line 10 + Line 11 - Line 12)	18,191,265	19,070,412
14	Assessment Ratio	18.5%	18.5%
15	Assessment Value (Line 13 * Line 14)	3,365,384	3,528,026
16	Composite Property Tax Rate	6.9000%	6.9000%
17	Staff Test Year Adjusted Property Tax Expense (Line 15 * Line 16)	\$ 232,211	
18	Company Proposed Property Tax	251,038	
19	Staff Test Year Adjustment (Line 17 - Line 18)	<u>\$ (18,828)</u>	
20	Property Tax on Staff Recommended Revenue (Line 15 * Line 16)		\$ 243,434
21	Staff Test Year Adjusted Property Tax Expense (Line 17)		232,211
22	Increase in Property Tax Due to Increase in Revenue Requirement		<u>\$ 11,222</u>
23	Increase in Property Tax Due to Increase in Revenue Requirement (Line 22)		\$ 11,222
24	Increase in Revenue Requirement		\$ 1,318,720
25	Increase in Property Tax Per Dollar Increase in Revenue (Line 23 / Line 24)		0.85100%

REFERENCES:

Line 15: Composite Tax Rate, per Company  
Line 18: Company Schedule C-1, Line 36

**BEFORE THE ARIZONA CORPORATION COMMISSION**

BOB STUMP

Chairman

GARY PIERCE

Commissioner

BRENDA BURNS

Commissioner

SUSAN BITTER SMITH

Commissioner

BOB BURNS

Commissioner

IN THE MATTER OF THE APPLICATION OF )  
CHAPARRAL CITY WATER COMPANY FOR )  
A DETERMINATION OF THE CURRENT FAIR )  
VALUE OF ITS UTILITY PLANT AND )  
PROPERTY AND FOR INCREASE IN ITS )  
RATES AND CHARGES BASED THEREON. )

DOCKET NO. W-02113A-13-0118

SURREBUTTAL

TESTIMONY

OF

JOHN A. CASSIDY

PUBLIC UTILITIES ANALYST

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

FEBRUARY 7, 2013

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**EXECUTIVE SUMMARY  
CHAPARRAL CITY WATER COMPANY  
DOCKET NO. W-02113A-13-0118**

The surrebuttal testimony of Staff witness John A. Cassidy addresses the following issues:

Capital Structure – Staff recommends that the Commission adopt a hypothetical capital structure for Chaparral City Water Company (“CCWC” or “Company”) for this proceeding consisting of 40.0 percent debt and 60.0 percent equity.

Cost of Equity – Staff recommends that the Commission adopt a 9.6 percent return on equity (“ROE”) for the Company. Staff’s estimated ROE for the Company is based on the 9.0 percent average of its discounted cash flow method (“DCF”) cost of equity methodology estimates for the sample companies of 8.6 percent for the constant-growth DCF model and 9.4 percent for the multi-stage DCF model. Staff’s recommended ROE includes an upward economic assessment adjustment of 60 basis points (0.6 percent).

Cost of Debt – Staff recommends that the Commission adopt a 5.2 percent cost of debt for the Company.

Overall Rate of Return – Staff recommends that the Commission adopt a 7.9 percent overall rate of return.

Ms. Ahern’s Testimony – The Commission should reject the Company’s proposed 10.50 percent ROE for the following reasons:

Ms. Ahern’s single-stage constant growth DCF estimates rely exclusively on analysts’ forecasts of earnings per share growth to calculate the dividend growth (g) component. Ms. Ahern overstates the current dividend yield ( $D_0/P_0$ ) component by using a 60-day average stock price ( $P_0$ ) value. Ms. Ahern’s risk-premium model cost of equity estimates derived from the CAPM, ECAPM and PRPM models are inflated due to the use of a risk-free ( $R_f$ ) rate based upon forecasted estimates of the 30-year U.S. Treasury yield. Ms. Ahern’s recommended cost of equity includes an upward 32 basis point credit risk adjustment and an upward 40 basis point business risk adjustment.

**I. INTRODUCTION**

**Q. Please state your name, occupation, and business address.**

A. My name is John A. Cassidy. I am a Public Utilities Analyst employed by the Arizona Corporation Commission ("Commission") in the Utilities Division ("Staff"). My business address is 1200 West Washington Street, Phoenix, Arizona 85007.

**Q. Are you the same John A. Cassidy who filed direct testimony in this case?**

A. Yes, I am.

**Q. What is the purpose of your surrebuttal testimony in this rate proceeding?**

A. The purpose of my surrebuttal testimony is to respond to the cost of capital rebuttal testimony of Chaparral City Water Company ("CCWC" or "Company") witness, Pauline M. Ahern ("Ms. Ahern's Rebuttal").

**Q. Please explain how Staff's surrebuttal testimony is organized.**

A. Staff's surrebuttal testimony is presented in three sections. Section I is this introduction. Section II presents Staff's comments on the rebuttal testimony of the Company's cost of capital witness, Ms. Ahern. Lastly, Section III presents Staff's recommendations.

**II. STAFF RESPONSE TO COMPANY'S COST OF CAPITAL WITNESS MS. PAULINE M. AHERN**

**Q. Please summarize the capital structure, cost of debt, cost of equity, and overall rate of return proposed in MS. Ahern's rebuttal.**

A. Ms. Ahern's rebuttal proposes a revised capital structure for the Company consisting of 14.45 percent debt and 85.55 percent equity,<sup>1</sup> a 5.97 percent cost of debt and an updated 10.5 percent cost of equity, resulting in an overall rate of return ("ROR") for CCWC of 9.85 percent.

**Q. In her rebuttal testimony, Ms. Ahern takes exception to Staff's recommended hypothetical 40 percent debt / 60 percent equity capital structure, citing Mr. Cassidy's testimony in a prior rate case, Rio Rico Utilities, Inc. ("Rio Rico"),<sup>2</sup> in which Staff found use of a hypothetical capital structure to be inappropriate.<sup>3</sup> Would Staff care to respond?**

A. Yes. In the Rio Rico case cited by Ms. Ahern, the circumstances were such that Staff did, indeed, determine that use of a hypothetical capital structure was not appropriate for that filing. In the Rio Rico docket cited by Ms. Ahern, Staff recommended use of the utility's actual 100.0 percent equity capital structure, with a downward Hamada financial risk adjustment being made to the cost of equity. Staff did not make a Hamada financial risk adjustment in its CCWC recommendation. So development of Staff's recommendations in the Rio Rico filing went beyond the simple fact that Staff utilized a hypothetical capital structure in that docket. Each case stands on its own, and it is not appropriate for Ms. Ahern to taken an exception to a previous Staff position while taking her observations out of the full context of that previous recommendation.

<sup>1</sup> See Ahern Rebuttal, Executive Summary (p. 3, lines 20-22); and Hubbard Rebuttal, Schedule D-1 Rebuttal and Schedule D-2 Rebuttal.

<sup>2</sup> Docket No. WS-02676A-12-0196.

<sup>3</sup> See Ahern Rebuttal, p. 9, at 14-21, and p. 9, footnote 4.

1 **Q. Why did Staff elect to recommend use of a hypothetical capital structure for**  
2 **CCWC?**

3 A. There were a number of reasons. As noted in Staff's direct testimony, these included the  
4 need to give recognition to CCWC's reduced exposure to financial risk relative to Staff's  
5 proxy group of companies,<sup>4</sup> to encourage CCWC to move towards a more balanced  
6 capital structure going forward,<sup>5</sup> and because Staff considers a balanced capital structure  
7 for a Class "A" utility to be one in which the debt component lies within a range of 40-60  
8 percent.<sup>6</sup> Additionally, this CCWC docket marks the first rate case in which Staff has  
9 relied on estimates derived from its DCF cost of equity models only.<sup>7</sup> Staff notes with  
10 some interest that the Company did not choose to dispute or challenge this aspect of  
11 Staff's current recommendation, presumably because that elements of Staff's current  
12 approach to cost of equity analysis worked in the Company's favor. Staff is not required  
13 to conform to any particular methodology to give recognition to the absence of financial  
14 risk exposure, and thus determined that use of a hypothetical capital structure for CCWC  
15 was appropriate.

16  
17 **Q. Since filing direct testimony in this docket, has Staff been made privy to information**  
18 **which bears out the propriety of using a hypothetical capital structure for CCWC?**

19 A. Yes. Staff recently obtained a copy of the Company's responses to data requests issued  
20 by RUCO which demonstrate significant variances between the capital structures of  
21 CCWC as an operating subsidiary (i.e., 15.5 percent debt and 84.5 percent equity), the  
22 capital structure of CCWC's immediate parent, EPCOR Water Arizona<sup>8</sup> (i.e., 61.2  
23 percent debt and 38.8 percent equity), and the capital structure of CCWC's ultimate

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<sup>4</sup> See Cassidy Direct, p. 9, lines 11-13.

<sup>5</sup> See Cassidy Direct, p. 9, lines 19-21.

<sup>6</sup> See Cassidy Direct, p. 10, lines 9-11.

<sup>7</sup> See Cassidy Direct, pp. 3-4, for discussion as to why Staff elected not to rely on estimates derived from the CAPM.

<sup>8</sup> The December 31, 2012 year end capital structure for EPCOR Water Arizona was provided pursuant to a response to RUCO data request 11.02b.



1 parent, EPCOR Utilities, Inc.<sup>9</sup> (i.e., 46.9 percent debt and 53.1 percent equity). As a  
2 consequence, Staff now has concerns that use of CCWC's reported December 31, 2012  
3 test-year end capital structure in this rate proceeding may harm ratepayers, as the  
4 Company's disproportionately high level of reported common equity may instead be  
5 supported by debt issued at the ultimate parent or intermediate parent level. This  
6 circumstance is commonly referred to as, double leverage.

7  
8 **Q. Why is double leverage a concern in a rate proceeding?**

9 A. If a parent company issues debt and allocates it down to a regulated utility subsidiary  
10 while characterizing this financial support as equity capital, and regulators allow such  
11 capital costs in calculating the utility's revenue requirement, then ratepayers would be  
12 required to pay the higher equity cost while the actual financial support provided by the  
13 parent company is lower cost debt.

14  
15 **Q. What evidence does Staff have that double leverage is present in CCWC's proposed**  
16 **capital structure?**

17 A. Given the fungible nature of money, demonstrating proof of double leverage is  
18 admittedly difficult. However, as shown in Exhibit JAC-A, for the year ended December  
19 31, 2012, the 84.5 percent equity component of CCWC's proposed capital structure is  
20 higher than the 53.1 percent equity component of its ultimate parent, EPCOR Utilities,  
21 Inc., and significantly higher than the 38.8 percent equity component of its immediate  
22 parent, EPCOR Water Arizona. Staff considers these variances in capital structure  
23 between CCWC and both its ultimate and immediate parent to be *prima facie* evidence  
24 that double leverage is present.

25  

---

<sup>9</sup> The December 31, 2012 year end capital structure for EPCOR Utilities, Inc. was provided pursuant to a response to RUCO data request 11.02a.

1 **Q. Does Staff believe that the vastly different observable differences in capital**  
2 **structure mix between CCWC, its ultimate parent and its immediate parent provide**  
3 **support for the reasonableness of Staff's recommended hypothetical 40 percent debt**  
4 **/ 60 percent equity capital structure in this docket?**

5 **A. Yes.**

6  
7 **Q. In her rebuttal testimony, Ms. Ahern points out that CCWC has historically been**  
8 **regulated based upon its actual capital structure. How does Staff respond?**

9 **A. Staff did recommend approval of CCWC's actual capital structure in the Company's last**  
10 **rate case, and it was adopted by the Commission in Decision No. 71308.<sup>10</sup> However, at**  
11 **that time CCWC was owned by American States Water ("AWR"), and EPCOR did not**  
12 **acquire an ownership position in CCWC until 2011.<sup>11</sup> Thus, for the reasons noted earlier,**  
13 **Staff feels that use of the Company's proposed capital structure is not warranted in this**  
14 **rate proceeding.**

15  
16 **Q. In her rebuttal testimony, Ms. Ahern argues that Staff's recommended hypothetical**  
17 **capital structure and 9.3 percent cost of equity leads to an "egregious" 1.68 percent**  
18 **equity risk premium for the Company and violates the economic principle of**  
19 **opportunity cost.<sup>12</sup> How does Staff respond?**

20 **A. First, Staff's updated recommended cost of equity for the Company is now 9.6 percent.**  
21 **Second, given the presence/appearance of double leverage, Ms. Ahern's criticism of**

---

<sup>10</sup> Docket No. W-02113A-07-0551.

<sup>11</sup> Pursuant to disclosures (Note 19 – Discontinued Operations) made in the 2010 Form 10-K and 2011 Form 10-K filed by American States Water with the Federal Securities and Exchange Commission, EPCOR Water (USA) Inc. acquired CCWC from AWR in 2011. AWR entered into a stock purchase agreement with EPCOR on June 10, 2010, the terms of which called for EPCOR to purchase all of the common shares of CCWC for a total purchase price of \$35.0 million, including the assumption of approximately \$6.0 million of long-term debt. Upon closing, EPCOR was to pay approximately \$29.0 million in cash to AWR. The sale of CCWC by AWR to EPCOR Water (USA) closed on May 31, 2011, with EPCOR paying AWR approximately \$29.0 million in cash on that date.

<sup>12</sup> See Ahern Rebuttal, p. 10 at 23 – p. 12 at 9.

1 Staff's cost of equity recommendations have been rendered moot, as ratepayers should  
2 not be expected to pay, in rates, an equity return on capital whose source is lower cost  
3 debt.  
4

5 **III. STAFF RECOMMENDATIONS**

6 **Q. Based on Staff's review of Ms. Ahern's rebuttal testimony and its updated cost of**  
7 **capital analysis, what are Staff's recommendations for the Company?**

8 A. Yes. Staff recommends the following for CCWC's cost of capital:

- 9 1. A capital structure of 40.0 percent debt and 60.0 percent equity.
- 10 2. A 5.2 percent cost of debt.
- 11 3. A 9.6 percent return on equity (a figure which includes an upward 60 basis point (0.6  
12 percent) economic assessment adjustment).
- 13 4. A 7.9 percent overall rate of return.  
14

15 **Q. Does this conclude your surrebuttal testimony?**

16 A. Yes, it does.

Chaparral City Water Company Cost of Capital Calculation  
Capital Structure  
And Weighted Average Cost of Capital  
Staff Recommended and Company Proposed

[A]	[B]	[C]	[D]
<u>Description</u>	<u>Weight (%)</u>	<u>Cost</u>	<u>Weighted Cost</u>
<b>Staff Recommended Structure</b>			
Debt	40.0%	5.2%	2.1%
Common Equity	60.0%	9.6%	<u>5.8%</u>
Weighted Average Cost of Capital			7.9%
<b>Company Proposed Structure</b>			
Debt	14.45%	5.97%	0.86%
Common Equity	85.55%	10.50%	<u>8.98%</u>
Weighted Average Cost of Capital			9.85%

[D] : [B] x [C]

Supporting Schedules: JAC-2, JAC-3 and JAC-4.

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[A]	[B]	[C]	[D]	[E]
<b>DCF Method</b>				
Constant Growth DCF Estimate		$\frac{D_1}{P_0}^1$	+	$k$
Multi-Stage DCF Estimate		2.9%	+	8.6%
Average DCF Estimate				9.4%
				<b>9.0%</b>
				<b>9.0%</b>
				0.6%
				<b>9.6%</b>
				0.0%
				<b>9.6%</b>

Chaparral City Water Company Cost of Capital Calculation  
Average Capital Structure of Sample Water Utilities

[A]	[B]	[C]	[D]
<u>Company</u>	<u>Debt</u>	<u>Common Equity</u>	<u>Total</u>
American States Water	43.3%	56.7%	100.0%
California Water	54.2%	45.8%	100.0%
Aqua America	55.2%	44.8%	100.0%
Connecticut Water	55.3%	44.7%	100.0%
Middlesex Water	43.1%	56.9%	100.0%
SJW Corp	56.2%	43.8%	100.0%
York Water	<u>45.0%</u>	<u>55.0%</u>	<u>100.0%</u>
Average Sample Water Utilities	<b>50.3%</b>	<b>49.7%</b>	<b>100.0%</b>
Chaparral City - Actual Capital Structure	<b>15.5%</b>	<b>84.5%</b>	<b>100.0%</b>

Source:

Sample Water Companies from Value Line

Chaparral City Water Company Cost of Capital Calculation  
Growth in Earnings and Dividends  
Sample Water Utilities

[A]	[B]	[C]	[D]	[E]
	Dividends Per Share 2003 to 2013	Dividends Per Share Projected	Earnings Per Share 2003 to 2013	Earnings Per Share Projected
<u>Company</u>	<u>DPS<sup>1</sup></u>	<u>DPS<sup>1</sup></u>	<u>EPS<sup>1</sup></u>	<u>EPS<sup>1</sup></u>
American States Water	5.6%	7.1%	14.8%	3.8%
California Water	1.3%	8.9%	4.5%	10.2%
Aqua America	7.6%	10.2%	9.6%	6.0%
Connecticut Water	1.7%	3.4%	3.7%	2.9%
Middlesex Water	1.5%	1.5%	5.1%	3.6%
SJW Corp	4.1%	5.4%	2.8%	7.5%
York Water	4.1%	6.1%	4.8%	8.8%
Average Sample Water Utilities	3.7%	6.1%	6.5%	6.1%

<sup>1</sup> Value Line



Chaparral City Water Company Cost of Capital Calculation  
Sustainable Growth  
Sample Water Utilities

[A]	[B]	[C]	[D]	[E]	[F]
<u>Company</u>	Retention Growth 2002 to 2012 <u>br</u>	Retention Growth Projected <u>br</u>	Stock Financing Growth <u>vs</u>	Sustainable Growth 2002 to 2012 <u>br + vs</u>	Sustainable Growth Projected <u>br + vs</u>
American States Water	3.8%	5.2%	1.5%	5.3%	6.8%
California Water	2.6%	3.4%	1.7%	4.2%	5.1%
Aqua America	4.0%	5.2%	1.8%	5.8%	7.0%
Connecticut Water	2.0%	3.4%	4.2%	6.2%	7.6%
Middlesex Water	1.3%	2.8%	3.0%	4.2%	5.7%
SJW Corp	3.3%	3.8%	0.1%	3.5%	3.9%
York Water	<u>2.2%</u>	<u>3.4%</u>	<u>4.6%</u>	<u>6.8%</u>	<u>8.0%</u>
Average Sample Water Utilities	<b>2.7%</b>	<b>3.9%</b>	<b>2.4%</b>	<b>5.2%</b>	<b>6.3%</b>

[B]: Value Line

[C]: Value Line

[D]: Value Line, MSN Money, and Form 10-Ks filed with the Securities and Exchange Commission (<http://www.sec.gov/>)

[E]: [B]+[D]

[F]: [C]+[D]

Chaparral City Water Company Cost of Capital Calculation  
Selected Financial Data of Sample Water Utilities

[A]	[B]	[C]	[D]	[E]	[F]	[G]
<u>Company</u>	<u>Symbol</u>	<u>Spot Price</u> <u>1/15/2014</u>	<u>Book Value</u>	<u>Mkt To</u> <u>Book</u>	<i>Value Line</i> <u>Beta</u> $\beta$	<u>Raw</u> <u>Beta</u> $\beta_{raw}$
American States Water	AWR	<b>27.42</b>	11.98	2.3	<b>0.65</b>	0.45
California Water	CWT	<b>22.49</b>	11.78	1.9	<b>0.60</b>	0.37
Aqua America	WTR	<b>22.78</b>	8.08	2.8	<b>0.60</b>	0.37
Connecticut Water	CTWS	<b>34.93</b>	14.08	2.5	<b>0.75</b>	0.60
Middlesex Water	MSEX	<b>20.48</b>	12.14	1.7	<b>0.75</b>	0.60
SJW Corp	SJW	<b>29.04</b>	15.38	1.9	<b>0.85</b>	0.75
York Water	YORW	<b>20.87</b>	8.28	<u>2.5</u>	<u>0.70</u>	<u>0.52</u>
Average				<b>2.2</b>	<b>0.70</b>	<b>0.52</b>

[C]: Msn Money

[D]: Value Line

[E]: [C] / [D]

[F]: Value Line

[G]:  $(-0.35 * [F]) / 0.67$

Chaparral City Water Company Cost of Capital Calculation  
Calculation of Expected Infinite Annual Growth in Dividends  
Sample Water Utilities

[A]	[B]
<u>Description</u>	<u>g</u>
DPS Growth - Historical <sup>1</sup>	3.7%
DPS Growth - Projected <sup>1</sup>	6.1%
EPS Growth - Historical <sup>1</sup>	6.5%
EPS Growth - Projected <sup>1</sup>	6.1%
Sustainable Growth - Historical <sup>2</sup>	5.2%
<u>Sustainable Growth - Projected<sup>2</sup></u>	<u>6.3%</u>
Average	<b>5.7%</b>

1 Schedule JAC-5

2 Schedule JAC-6

Chaparral City Water Company Cost of Capital Calculation  
Multi-Stage DCF Estimates  
Sample Water Utilities

[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]
Company	Current Mkt. Price ( $P_0$ ) <sup>1</sup> 1/15/2014	Projected Dividends <sup>2</sup> (Stage 1 growth) ( $D_t$ )				Stage 2 growth <sup>3</sup> ( $g_n$ )	Equity Cost Estimate ( $K$ ) <sup>4</sup>
		$d_1$	$d_2$	$d_3$	$d_4$		
American States Water	27.4	0.78	0.82	0.87	0.92	6.5%	9.3%
California Water	22.5	0.68	0.71	0.75	0.80	6.5%	9.4%
Aqua America	22.8	0.60	0.63	0.67	0.71	6.5%	9.1%
Connecticut Water	34.9	1.01	1.06	1.12	1.19	6.5%	9.3%
Middlesex Water	20.5	0.78	0.83	0.88	0.92	6.5%	10.3%
SJW Corp	29.0	0.77	0.81	0.86	0.91	6.5%	9.1%
York Water	20.9	0.58	0.61	0.65	0.68	6.5%	9.2%

$$P_0 = \sum_{t=1}^n \frac{D_t}{(1+K)^t} + \frac{D_n(1+g_n)}{K-g_n} \left[ \frac{1}{(1+K)} \right]^n$$

Average      **9.4%**

Where :  $P_0$  = current stock price  
 $D_t$  = dividends expected during stage 1  
 $K$  = cost of equity  
 $n$  = years of non - constant growth  
 $D_n$  = dividend expected in year n  
 $g_n$  = constant rate of growth expected after year n

1 [B] see Schedule JAC-7

2 Derived from Value Line Information

3 Average annual growth in GDP 1929 - 2012 in current dollars.

4 Internal Rate of Return of Projected Dividends

**Comparison of Ultimate Parent, Immediate Parent, and Subsidiary Operating Unit Capital Structures**  
**(EPCOR Utilities, Inc., EPCOR Water Arizona, and Chaparral City Water Company)**  
**2008 - 2012**

**EPCOR Utilities, Inc.****Year End Capital Structures, 2008 - 2012**

	2008		2009		2010		2011		2012	
	\$	%	\$	%	\$	%	\$	%	\$	%
Short-term debt	\$ 166		\$ 225		\$ 219		\$ 17		\$ 14	
Long-term debt	2,702		1,692		1,453		1,682		1,956	
Total Debt	2,868	53.9%	1,917	43.7%	1,672	41.7%	1,699	42.0%	1,970	46.9%
Common Shares	\$ 24		\$ 24		\$ 24		\$ 24		\$ 24	
Retained Earnings	2,429		2,446		2,318		2,327		2,210	
Total Equity	2,453	46.1%	2,470	56.3%	2,342	58.3%	2,351	58.0%	2,234	53.1%
Total Capital	\$ 5,321	100.0%	\$ 4,387	100.0%	\$ 4,014	100.0%	\$ 4,050	100.0%	\$ 4,204	100.0%

**EPCOR Water Arizona****Year End Capital Structures, 2008 - 2012**

	2008		2009		2010		2011		2012	
	\$	%	\$	%	\$	%	\$	%	\$	%
Long-term debt	\$ 194,768		\$ 184,112		\$ 195,565		\$ 195,454		\$ 240,337	
Short-term debt	57,941		69,340		60,318		49,090		-	
Total Debt	252,709	62.1%	253,452	62.1%	255,883	62.1%	244,544	60.3%	240,337	61.2%
Common Equity	\$ 154,506	37.9%	\$ 154,666	37.9%	\$ 156,292	37.9%	\$ 160,704	39.7%	\$ 152,248	38.8%
Total Capital	\$ 407,215	100.0%	\$ 408,118	100.0%	\$ 412,175	100.0%	\$ 405,248	100.0%	\$ 392,585	100.0%

**Chaparral City Water Company****2012 Year End Capital Structure**

	2012	
	\$	%
Long-term debt	\$ 4,935	
Short-term debt	-	
Total Debt	4,935	15.5%
Common Equity	\$ 26,901	84.5%
Total Capital	\$ 31,836	100.0%